Abstract

The primary function of any database is efficient data storage, seamless manipulation, and optimized updates and retrieval. Prior to database management systems, data was managed in file-based systems which hosted challenges such as integrity, security and isolation issues. Nowadays, a database management system combats these issues with additional advantages such as multi-user access which contributes to the optimized processing of business intelligence data. The system also allows users to perform analytics using the SQL data query language in order to uncover insights for strategic business decisions.

Pertaining to the Airbnb data mart, the system organizes data centered around users, bookings and listings. Enabling one to perform tasks such as storing basic profile information of a user, managing listings, to procuring bookings. The following tables encapsulate a high-level summary of the database.

Database Summary:

Database Engine and Version	PostgreSQL 16.3
Number of Tables	23
Size of the Database	9508 kB
Data Integrity Constraints	17 PKs, 29 FKs, 12 Comp PKs

Metadata Summary:

No.	Name	Rows	Avg_row_length_bytes	Total_size_bytes	Index_size
1	Address	20	2457.6	49152	32 kB
2	Amenities	20	2048	40960	32 kB
3	Amenities Availability	20	2048	40960	32 kB
4	Booking	20	4505.6	90112	80 kB
5	Calendar	20	2048	40960	32 kB
6	Card Holder	20	2048	40960	32 kB
7	Guest Info	20	2048	40960	32 kB
8	Host Info	20	4096	81920	32 kB
9	House Rules	20	2457.6	49152	32 kB
10	Listing	20	6553.6	131072	112 kB
11	Message Booking	20	-16384	16384	16 kB
12	Messaging	20	2048	40960	32 kB
13	Payment Details	20	4505.6	90112	32 kB

14	Photos	20	4096	81920	64 kB
15	Pricing	20	2457.6	49152	32 kB
16	Profile	20	13107.2	262144	208 kB
17	Ratings Profile User	20	2048	40960	32 kB
18	Reviews	20	2457.6	49152	32 kB
19	Rules Availability	20	2048	40960	32 kB
20	User Profile Listing	20	2048	40960	32 kB
21	User Verification Info	20	2048	40960	32 kB
22	Wishlist	20	2867.2	57344	48 kB
23	Wishlisting	20	2048	40960	32 kB